Roseville Public Works, Environment and Transportation Commission
Meeting Agenda

Tuesday, September 27, 2011, at 6:30 p.m.
City Council Chambers, 2660 Civic Center Drive
Roseville, Minnesota 55113

6:30 p.m.	**1.**	**Introductions/Roll Call**
6:35 p.m.	**2.**	**Public Comments**
6:40 p.m.	**3.**	**Approval of July 26, 2011 Meeting Minutes**
6:45 p.m.	**4.**	**Communication Items**
7:15 p.m.	**5.**	**Draft of Neighborhood Traffic Management Policy**
8:00 p.m.	**6.**	**Asset Management for Public Utilities**
8:30 p.m.	**7.**	**Possible Items for Next Meeting – October 25, 2011**
8:40 p.m.	**8.**	**Adjourn**

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Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: September 27, 2011 **Item No:** 3

Item Description: Approval of the Public Works Commission Minutes July 26, 2011

Attached are the minutes from the July 26, 2011, meeting.

Recommended Action:

Motion approving the minutes of July 26, 2011, subject to any necessary corrections or revision.

Move: _____

Second: _____

Ayes: _____

Nays: _____

Roseville Public Works, Environment and Transportation Commission Meeting Minutes

Tuesday, July 26, 2011, at 6:30 p.m.
City Council Chambers, 2660 Civic Center Drive
Roseville, Minnesota 55113

1. Introduction / Call Roll

Chair Jim DeBenedet called the meeting to order at approximately 6:30 p.m.

Members Present: Chair Jim DeBenedet; and Members Jan Vanderwall; Joan Felice; and Steve Gjerdingen

Members Absent: Member Duane Stenlund

Staff Present: Public Works Director Duane Schwartz; City Engineer Debra Bloom

Others Present: None.

2. Public Comments

No one appeared to speak at this time.

3. Approval of June 28, 2011Meeting Minutes

Member Vanderwall moved, Member Felice seconded, approval of the June 28, 2011 meeting as amended.

Corrections:

- **Page 9, paragraph 7 (Vanderwall)**

Spelling correction from "resent" to 'recent"

Ayes: 2
Nays: 0
Abstentions: 2 (DeBenedet; Gjerdingen)
Motion carried.

4. Communication Items

Public Works Director Duane Schwartz noted that updates on various construction projects were included in tonight's meeting packet or available on-line, as detailed in the staff report dated July 26, 2011. Mr. Schwartz advised that

the Rice Street project was slowly returning to work with the State back in operation and anticipated another 1-1.5 months to get all traffic lanes open to traffic.

At the request of Member Vanderwall, Mr. Schwartz confirmed that the bridge opening timeline should coincide with completion of the other work, once remaining median work was finished.

Chair DeBenedet questioned the status of private underground utility work as it related to sidewalk installation; and expressed his concern and frustration with the contractors maintaining handicapped accessibility throughout the project. While not being clear on how the ADA addressed temporary access and handicapped ramps during construction projects, Chair DeBenedet noted that there was accessibility through the project are prior to the project's start; and it had certainly been interrupted in the interim, and asked that staff address this issue at upcoming construction meetings to bring resolution on behalf of the City's handicapped citizens.

Mr. Schwartz advised that most of the sidewalks had been installed, with few exceptions; however, he advised that there were several subcontractor issues yet to be resolved. Mr. Schwartz advised that several curb cuts needed to be redone to meet ADA compliance requirements; and concurred that in the interim, the contractors have not done a good job of facilitating handicapped citizens.

Chair DeBenedet noted that it was a safety concern; and opined that there was no need for that lack of accessibility other than for sloppy contractor work.

Mr. Schwartz advised that there had been numerous contentious issues and meetings; one issue being erosion control or lack thereof.

Member Vanderwall concurred; and noted in addition to his personal comments at those meetings as a representative of the School District, Mr. Schwartz had been very diligent in bringing that very issue up at various times.

Mr. Schwartz noted that the large rainfall event the weekend of July 16, 2011, had created additional issues, and required a lot of clean-up work as a result, not having been designed for such a rain event.

Member Vanderwall questioned the status of the Dale Street project, and ongoing dirt piles and apparent delays in work on that project.

City Engineer Debra Bloom advised that the contractor had not been making significant progress, and following discussions with them by staff last week, they were now moving forward again. Ms. Bloom advised that the contractor blamed the delay on the subcontractor who had planned to haul excess excavation materials to a state project, but with the state government shutdown, that had

negated that possibility, and with no other place for disposal being readily available, that subcontractor stopped work on the project. Ms. Bloom advised that there were other segments of the project underway during that time, but not as obvious since they weren't on Dale Street.

Mr. Schwartz advised that the contractor had started on the south end of Dale Street earlier today; and the curb was scheduled for installation on Dale Street by August 8, 2011. Mr. Schwartz noted that this project had also been impacted, and required clean-up, as a result of the massive rain event.

Mr. Schwartz provided an update on the 2012 City Budget process to-date, and impacts to the Public Works Department budget related to the City Manager-recommended budget, and affecting virtually every department in the City. Mr. Schwartz advised that impacts to the Public Works Department would include reductions in building and street light maintenance; a significant reduction in pathway maintenance and reduction in the seal coat program; in addition to other miscellaneous impacts, as well as elimination of the annual fall residential leaf collection program. Mr. Schwartz advised that the drop off site would remain open. Mr. Schwartz noted that discussions would continue over the next few City Council meetings; and that the Council had expressed some concerns with identified impacts at their meeting July 25, 2011.

Discussion included impacts to snow removal in the maintenance discussions, with the potential loss of one (1) FTE, thereby reducing snow plow routes by one, and extending plowing by approximately forty-five minutes.

At the request of Chair DeBenedet and plan designs / construction schedules and plans for Rice Street from County Road B-2 to County Road C-2, Mr. Schwartz advised that preliminary engineering plans were anticipated later this fall. Mr. Schwartz advised that, at their last meeting, both the Cities of Little Canada and Roseville were on the same page; and while the project was originally planned for 2012, rights-of-way acquisition and clarification, the state then intended to defer it to late summer start in 2012. Given that late start date, Mr. Schwartz advised that City feedback had requested delaying the project for another season with work then beginning in the spring of 2013; and thus allowing all private utilities to complete their work in 2012.

Chair DeBenedet noted the need for discussion on undergrounding utilities on that segment.

Mr. Schwartz noted that staff had requested Xcel to provide preliminary cost estimates; however, they could not do so until a preliminary plan was in place.

Member Felice questioned the status of the Fairview Pathway project, with Ms. Bloom advising that now that the state is operating again, bids had been opened on Friday, July 22; but had been substantially above the engineer's estimate, with

the lowest bid at $850,000 for Phase I, and only $1 million allotted for the entire project. Ms. Bloom advised that staff was now meeting with MnDOT to determine the next steps; whether quantities in the bid document aligned with proposed work; and whether the bid will proceed to award or be rebid as concurred by the various partners (MnDOT, U of MN, Cities of Falcon Heights and Roseville, and Livable Communities Grant funds administered through TLC). Ms. Bloom noted there was a possibility of additional grant funds being available, but it was too soon to tell at this early stage.

5. Utility Rate/Capital Improvement Program Funding Discussion

Mr. Schwartz apologized for Finance Director Chris Miller being unable to attend tonight's meeting; and proceeded to detail the information on the proposed 2012 utility rates, as outlined in the July 18, 2011 memo and referenced documents attached. While staff annually reviews utilities for rate adjustments, Mr. Schwartz noted that an added piece this year was recommended by the Council-appointed Capital Improvement Plan (CIP) Task Force, consisting of Mayor Roe, Councilmember Johnson, City Manager Malinen and Finance Director Miller. Mr. Schwartz noted later during the discussion that the Public Works Department had provided technical assistance on the various infrastructure systems and their needs anticipated and projected over the next thirty (30) years. Mr. Schwartz noted that that infrastructure overview had been presented to the Commission at last month's meeting.

Member Vanderwall observed that documentation confirmed that the CIP was underfunded by huge amounts.

Mr. Schwartz reviewed how the analysis had been done, through addressing fixed, personnel and variable costs (wholesale water purchase and treatment of storm water); and the resulting recommendations of the Task Force for all utility operations as detailed in the report.

Mr. Schwartz reviewed the underfunding for capital financing over a number of years between annual funds available and actual annual needs; with the Task Force recommending these one-time significant rate adjustment to bring funding levels in line with capital needs for the next twenty (20) years, providing for less of an impact annually than by projecting needs in advance. Mr. Schwartz identified proposed base rate and use rate impacts.

Mr. Schwartz advised that the City Council and Task Force was asking the PWET Commission if they were supportive of that recommendation; and if not, an alternative recommendation.

Mr. Schwartz responded to Commission questions, comments and clarification needs throughout the presentation.

<u>Water Operations</u>

Mr. Schwartz noted that the actual 2012 reduction of 1.1% in the budget was due to determining that a projected rehabilitation of an existing water tower was reduced to draining the tank, cleaning off rust and corrosion, and spot welding; and that it had been concluded that further work could be deferred following analysis of the tower.

Mr. Schwartz noted that the largest increase, anticipated to be 4.5%, was in wholesale water purchase from the Saint Paul Regional Water Utility (SPRWU).

Mr. Schwartz noted that these substantial increases in water costs were metro-wide due to declining water use; and the need for the SPRWU to spread their water production costs over that smaller number of gallons being used. Mr. Schwartz advised that if water usage was stable or increasing, the percentage of increase would be reduced accordingly.

Sanitary Sewer Operations

Mr. Schwartz noted that the single largest operating cost for the sanitary sewer operation is treatment costs paid to the Metropolitan Council Environmental Services Division (MCES) as detailed in the report. Mr. Schwartz noted that the MCES had notified the City that there treatment costs were expected to increase by approximately 11% in 2012; based in part to the continued presence of significant storm water infiltration into the system.

Member Vanderwall observed the obvious need for more maintenance to stop inflow and infiltration (I & I) into the system.

Member Felice observed that more upfront investment would save money long-term.

Mr. Schwartz reviewed how the Metropolitan Council sewer lines were metered coming into and leaving the City of Roseville, allowing them to determine how much was attributable to the City. Mr. Schwartz noted that, in previous surcharge programs, all was attributed to Roseville; however, he noted that the City had been successful in negotiating with the Metropolitan Council, based on pipe diameter, to accept half as their responsibility in the new program starting in January of 2012. Mr. Schwartz noted that they were not willing to renegotiate any past differentials; only going forward with the new program.

While specific projects were not addressed in CIP needs, Mr. Schwartz advised that age and deterioration in various segments of the sanitary sewer system pipes were considered in determining those projected needs, as well as the type of pipe in that section of the City and standard engineering practices. Mr. Schwartz noted that there would be some areas where pipe lining would suffice, with other areas requiring replacement, each option ultimately providing a useful life of the system in the 59-80 year range.

Chair DeBenedet opined that this is one project needing recondition of all pipes in the system that are clay or reinforced concrete sewer mains; and with more than 100 miles of pipe, it would take a minimum of twenty (20) years to accomplish the task.

Mr. Schwartz estimated closer to thirty (30) years; but the City was only taking the first twenty (20) years into consideration at this time.

Member Felice questioned the life expectancy of new materials and whether they had been used long enough to know an accurate history on their lives.

Chair DeBenedet advised that his research of the USGPA provided a listing for all different types of materials and their life expectancies; with sewer lining material providing a vast difference in predicted life expectancies; however, not historically proven at this time.

Mr. Schwartz noted that the oldest of the Cities pipes would have reached the 80-year range before completion of the twenty to thirty (20-30), long-term CIP program.

Chair DeBenedet opined that there may be more leakages and infiltration or sewer backups that would increase maintenance costs, but no major failures anticipated. Chair DeBenedet noted that there may not be much agreement on life expectancy of material types, but customer dissatisfaction with reliability of the service would be a significant factor. Chair DeBenedet opined that the capital replacement should not be put off so long that it becomes a political issue with no public support or faith in replacement of the City's infrastructure.

Mr. Schwartz noted another cost impact for the Metropolitan Council was the downturn in the building trade, since collection of Sewer Availability Charges (SAC's) were used by them for their CIP program; however, their revenues had diminished significantly with the downturn in the economy and new buildings. Therefore, Mr. Schwartz advised that they were shifting their CIP costs onto their treatment rates.

Chair DeBenedet noted that, as sewer systems continue to age and leak more, that overflow passed into wastewater treatment plants; and as they couldn't treat it, they were only able to partially treat that flow before it got to the river, creating violations of environmental permitting requirements. Chair DeBenedet noted the need to address that, as a society and from an environmental standpoint, before that happened, and that could be accomplished by planning ahead. Chair DeBenedet opined that the SAC charges were the best planning tool available, allowing wastewater treatment plans to be installed to accommodate additional capacity for new construction. However, if that new construction wasn't happening, Chair DeBenedet noted that the treatment plan may have more useful years, but lacked revenue to support its operations.

Related to potential discharges to the river, Mr. Schwartz noted that the recent July rainfall events created the first time for the Metropolitan Council I Roseville where the trunk line was over capacity and started to backup into homes in the southeast portion of Roseville. Mr. Schwartz advised that the Metropolitan Council had narrowly averted discharge to the Mississippi River due to that discharge.

At the request of Member Gjerdingen, Mr. Schwartz confirmed that having a better CIP replacement schedule could lower treatment costs; but that it would also be accomplished by identifying and eliminating private services (e.g. sump pump inspections) to eliminate additional I & I. Mr. Schwartz advised that staff had thought they were making progress; however, recent evidence indicated that the City needed to be even more aggressive.

Storm Drainage Operations
Mr. Schwartz noted that a proposed 6.8% increase in this fund was proposed.

Overall Rate Impacts
Mr. Schwartz addressed overall impacts projected for a typical homeowner reflected in tables on pages 4-6 of the report, estimated at $40 per household or a 32.1% overall increase.

Mr. Schwartz advised that neither he or Finance Director Miller were seeing any significant change in usage since conservation rates were implemented; while recognizing that the last two (2) years had been wet and creating significant less water usage. Whether there will be any recognizable impact on the part of homeowners with differential rates that would cause habit changes or usage, Mr. Schwartz opined remained to be determined.

Member Vanderwall opined that some may become evidenced with the proposed rate structure.

At the request of Member Gjerdingen, Mr. Schwartz clarified that operating costs (fixed) included capital replacements currently funded through the fixed part of the rate; with water purchases from the SPRWU billed on the usage portion of rates; similar to that structure used for sanitary sewer treatments with the Metropolitan Council.

Mr. Schwartz provided comparables with other metropolitan communities; with water/sewer rates remaining average. Mr. Schwartz noted that variables were based on the level of treatment for water, with Roseville delivering softened water to Roseville homes, while many communities with groundwater systems were treated at the point of the use – with home water softeners. Mr. Schwartz advised that storm drainage rates were previously well-below average, and this proposed increase would put the City on average with other metropolitan communities.

Member Felice noted that part of the necessary infrastructure costs and rate increase could be justified on the age of Roseville as an older metropolitan suburb requiring maintenance of its older infrastructure, a situation not faced by newer metropolitan suburbs.

Mr. Schwartz noted that Roseville was the first City in the State of MN to implement a storm water utility and begin planning for these needs, long before other communities did.

Mr. Schwartz called the Commission's attention to the supporting Task Force memorandums included in the agenda packet materials and their specific recommendations to increase 2012 rates by $2.2 million overall; with a one-time transfer from the Storm water to Water Fund to make it solvent.

Member Vanderwall noted the difficulty in deciphering the chart at the bottom of the June 20, 2011 memorandum to determine total impacts of the Task Force recommendations; with Mr. Schwartz apologizing for the black and white versus color copy of the graph and referring Commissioners to the June 13, 2011 City Council meeting packet for better copies.

At the request of Member Vanderwall, Mr. Schwartz confirmed that the proposed rate structure would nearly fully-fund the CIP over that twenty (20) year period.

Mr. Schwartz reiterated the request of the CIP Task Force and the interpretation of City Manager Malinen and Finance Director Miller that the City Council would like a recommendation from the Commission as to their support of the Task Force recommendations; or an alternative rate structure suggestion.

At the request of Member Gjerdingen, Mr. Schwartz clarified that the CIP data was based on a financial analysis performed by the Task Force, with background information and project costs provided by Public Works staff.

<u>Individual Member Comments</u>
Member Vanderwall noted that City staff was also proposing cutting services in other areas on the operational side to assist in addressing these depreciation and capital outlay needs, beyond the proposed rate increase.

Member Vanderwall recognized that the proposed percentage increase provided some scary numbers; however, when broken down into quarterly and monthly rates, it came out to approximately $11.00 per month per household. Member Vanderwall opined that it then sounded much less intimidating that the 62% increase that dollar amount represented.

If the CIP estimates are accurate, and Member Vanderwall opined that he believed them to be accurate from his perspective as a PWET Commission

perspective; he further opined that good governance required that this burden not be deferred to the next generation or the responsibility of the next City Council. Member Vanderwall noted that the "kick the can down the road" approach to financial responsibility was not working at a federal or state level, and that it wouldn't work locally either. Member Vanderwall spoke in support of a "pay as you go" approach was much more prudent.

Member Vanderwall provided a personal analogy with his townhome association and lack of adequate capital funding; with the Board's Finance Committee suggesting at 35% increase in monthly dues, 6 x's the current rate; and likened this to that situation. Member Vanderwall opined that if another ten (10) years went by before addressing this CIP need, it would only be more expensive; in addition to the ongoing repairs and emergencies and added costs over that time span.

Member Vanderwall recognized that this need is problematic, since it is essentially a hidden cost, since most infrastructure is underground, and no one sees it when its working properly or effectively; and only became obvious when problem developed or it wasn't working.

Member Vanderwall expressed confidence in the community's excitement to finally address these CIP needs; and the positive steps being recommended by this City Council and staff to address it now and avoid costlier and more major issues in the future through continual deferral.

Member Felice opined that, by taking steps now, there was some idea of what you were coming up against; and if deferral of CIP needs continued, it created too many unknowns. While being difficult to tell citizens they were going to need to pay more money out, Member Felice opined that there was a good reason for this projected rate increase to maintain what infrastructure the City owned; and to avoid potentially catastrophic failures of the system.

Member Gjerdingen opined that the only way this rate increase could be challenged is if the City was spending too much repairing the infrastructure due to lack of good management of that resource. Member Gjerdingen advised that his only question was how careful the analysis had been and how accurate the numbers.

Chair DeBenedet, based on his extensive background in Civil Engineering, his review of plans and specifications for many infrastructure systems, and his first-hand experience in working with his plumber father, and opined that the infrastructure issues currently needing addressed were not a surprise to him. Chair DeBenedet advised that installations and materials used in the 1960's would no longer be used based on changes in the industry and technology improvements. Chair DeBenedet noted that the City of Roseville was not the only community

facing this issue; and many cities with even older infrastructure systems had been dealing with it for an even longer time.

On a personal note, Chair DeBenedet noted that his initial interest in applying to serve on the PWET Commission, given his career experience, was to personally investigate whether Roseville was doing a good job maintaining its infrastructure systems in the most cost-effective manner; not necessarily the least expensive, but through providing the most value for the longest period of time for taxpayers. Chair DeBenedet noted that these pipe infrastructure systems lasted a long time, between 50-100 years; and he had originally decided to base his capstone paper for his Master's program on this very issue. While having a different idea initially, Chair DeBenedet noted his paper had caused him to realize that this project needed to be addressed sooner, not later.

Following his extensive research of the City's infrastructure system, and as part of his paper, Chair DeBenedet opined that he was absolutely in agreement with how the City was proposing to handle its currently unfunded CIP and infrastructure needs. While preparing his paper, providing consultations with Finance Director Miller and Public Works Director Schwartz, Chair DeBenedet advised that he initially thought it would not be possible to complete the CIP in twenty (20) years. While taking into consideration street reconstruction projects and asset management programs to schedule work and stage it for the lowest overall cost, Chair DeBenedet opined that he determined that the newer materials and technologies may provide a longer projected lifespan than twenty (20) years, if and when they are properly constructed.

Chair DeBenedet noted that his original concerns were whether the City of Roseville was being thoughtful about its infrastructure replacement; noting that often when cities look at being proactive and providing good governance, its elected officials are faced with difficult issues and push off those infrastructure needs to future elected officials. However, Chair DeBenedet opined that the City of Roseville did not have that problem, with its current elected officials willing to take the initiated to address these CIP needs, with much of the Roseville infrastructure system at an 80-90 life by the time they're scheduled for replacement. Chair DeBenedet opined that there was no question that new materials and technologies were better and would provide more years, even those lined and not replacement.

Chair DeBenedet advised that he was all in favor of doing this and was more than willing to pay his fare share of the costs. Chair DeBenedet opined that sewer and water services were one of the best utility values received by residents today; and people didn't realize the value of safe water compared to what other countries faced, or what was faced by this country 100 years ago. While recognizing that these seem to massive issues today, Chair DeBenedet noted similar investments made when needed by previous generations, and the need to act similarly today for the benefit of current and future residents and generations.

MOTION
Member Vanderwall moved, Member Felice seconded, recommended to the City Council and fellow citizens that the proposed rate structure recommended by the City Council-appointed CIP Task Force was supported by the PWET Commission, and should be embraced and moved forward.

Ayes: 4
Nays: 0
Motion carried.

6. Storm Event Update (7/16/2011 – 6+ inches of rain)

Ms. Bloom and Mr. Schwartz provided a pictorial overview of various problems encountered on July 16, 2011 when the City received 5+ inches of rain in the early morning hours and over 6" in the 24-hour period. Pictures provided areas with significant street flooding in many parts of the City and property damage in some locations. Ms. Bloom advised that staff was continuing to follow-up with properties through surveys and future project recommendations to address those problem areas. A map was included in the agenda packet showing areas of concern and the number of sites impacted during the recent storm.

On a positive note, Ms. Bloom and Mr. Schwartz also provided pictorial evidence of some successes from recent drainage improvements put in place in recent years, with evidence of how well various projects worked. Ms. Bloom noted that, while some of the past areas continue to have drainage issues, recent projects had lessened the damage that would have occurred without those past improvements.

Significant drainage issues remained on the south side of Bennett Lake and back-ups from that water body. Ms. Bloom identified damages to storm water drainage systems in place, and failure of the sanitary sewer lift station at Long Lake Road south of County Road D when electrical controls shorted out, at significant expense, due to the depth of the water; and the Cohassey Boulevard Lift Station controls close to shorting out, with water depths within 1" of the electrical controls

Several of the pictures provided by Ms. Bloom identified the importance to educate homeowners on the importance of maintaining swales on their back and side properties, rather than installing sheds of walls or some type of vegetation that prevents their natural flow to minimize property and infrastructure damage.

Ms. Bloom noted drainage issues with the ball field at Fairview Community Center, and advised that she and Mr. Schwartz would be studying the area and seeking partnership opportunities with the School District for corrective measures.

Ms. Bloom noted the staffing partnership between the Cities of Maplewood and Roseville would allow the Maplewood City Engineer to assist with some plans to alleviate ongoing problem areas that are not simply related to pipe capacity issues.

Member Vanderwall suggested a great neighborhood volunteer opportunity for Roseville residents in cleaning up storm sewers after a rain event by raking them out and putting the debris with their other yard waste, recognizing that with significant rain events or on weekends, City staff may not be able to get around in a timely manner to clean all of them out, considering their other priorities during a significant event and emergency situations needing to be handled.

Pictorial evidence was provided showing the size of debris going through the system, creating additional issues, including undermining a retaining wall by McCarron's Lake; and failure of the weir walls at Villa Park. Pictures included the Williams Street access road to the pond, recently bid and in process, with it faring quite well, as Capitol Region Watershed District continued to monitor the water coming in and filter benches (steel wool filing) functioning well with manhole water found to be clear.

Ms. Bloom provided pictorial evidence that the Prince of Peace Church rain garden had survived and worked as intended, another success story with the City partnering for its installation with the Ramsey Conservation District (RCD).

Chair DeBenedet observed the need for additional upland infiltration and rain gardens to further address the situation.

Ms. Bloom provided evidence of the success of the Walsh Lake project; with no flooding of homes previous flooded after a new pipe was installed. Ms. Bloom briefly reviewed other areas under consideration through partnership with the Maplewood City Engineer to do some model sharing to address chronic issues still pending. Ms. Bloom noted that the 2003 Surface Water Management Plan indicated that some retrofit may be needed in neighborhoods to install or improve swales or install rain gardens. Ms. Bloom noted ongoing concerns with the Skillman Avenue cul-de-sac; the Bennett Lake system; and pipe capacity concerns where they were overtaxed.

As previously mentioned by Mr. Schwartz, the Metropolitan Council's main trunk line became overtaxed and a number of homes experienced sewer backups, when the City's lines couldn't discharge fast enough into the trunk line due to that overtaxing. Ms. Bloom noted that the City did not observe any discharge from manholes (raw sewage), but it was 6-8' deep in the manholes.

Mr. Schwartz opined that the overall message is that, while there remain a lot of issues, progress has been made over the last ten (10) years in addressing chronic problem areas; but work remains to be done. Mr. Schwartz noted that there were

no guarantees that catastrophic events will not happen nor that they will be fully mitigated.

Chair DeBenedet opined that the concept of a major rain event needs to change; and that a City would never be able to design for all events; and that it was still a learning process to facilitate emergency overflow routes.

Mr. Schwartz noted that storm water management technologies and options had changed over the years as well; and more understanding of those options and efforts continued.

Staff noted that the Fire Department responded to the Fairview and Highway 36 flooding area, and as typically done, the area was blocked off with barricades until the water level diminished.

7. Volunteer Opportunities

Chair DeBenedet noted his request to staff to include this on tonight's agenda, based on comments made at previous meetings by Member Stenlund related to projects and volunteers available for those projects.

In his recent bicycling along County Road C toward the entrance to Acorn Park, Chair DeBenedet noted the lack of a vision triangle with only 5' between the pathway and access to the park. Chair DeBenedet opined that this was a perfect volunteer opportunity, as a lot of the underbrush preventing adequate and safe visuals in that area was due to Buckthorn. With Mr. Schwartz expressing confidence that the Parks and Recreation Department was supportive of any volunteer assistance, Chair DeBenedet advised that he would coordinate with Parks and Recreation Director Lonnie Brokke and Member Stenlund on this issue as a potential Boy Scout project.

As a frequent walker in Acorn Park, Member Vanderwall noted Member Stenlund's previous concerns with erosion in the park; however, he suggested that sometime in October or November, a weekend be set aside for an entire school or large-group project to remove the considerable amount of Buckthorn in the Park, since they appeared to be overtaking most of the underbrush.

Chair DeBenedet suggested that, if the PWET Commission agreed to sponsor such efforts, the Commission ask the Public Works and Parks and Recreation staff to communicate who and how to take the lead; and how to coordinate with City staff on trucks and equipment, along with assistance or supervision for volunteers.

Member Vanderwall suggested staff train the PWET Commission on how to go about removing the Buckthorn.

Chair DeBenedet also noted comments of Member Gjerdingen at past meetings on overhanging tree branches near or over pathways; and noted his personal

experience at Long Lake Road and County Road C with a branch coming down on the pathway, creating safety hazards for bicyclists. Chair DeBenedet suggested volunteer projects for traversing pathways for tree trimming at appropriate times of the year, whether privately or publically-owned if they were in the pathway easement area.

Member Gjerdingen cautioned the Commission to determine who had the authority to trim, in accordance with City Ordinance, and having certified volunteers or a staff person available before trimming is attempted.

Member Vanderwall suggested that a more cautious first step may be to provide notice to homeowners to trim their trees as applicable to keep them out of the pathway easement area.

Member Gjerdingen noted a problematic area near the park frontage along Lincoln Drive that would be a huge step in the right direction if those areas were identified and mitigated by volunteers.

Member Vanderwall noted that Buckthorn was prolific in the entire City, not just in Acorn Park; and suggested a Buckthorn Core of Volunteers to go around the entire City. Member Vanderwall opined that this would provide a benefit in every neighborhood and across the community, as well as most parks; and that after the Buckthorn was eradicated, the next project could be Purple Loosestrife.

8. Solid Waste Update

Chair DeBenedet noted staff including several news articles in the meeting packet form communities in the region, and recent overflow crowds for related meetings, such as the one held in Maplewood.

Mr. Schwartz noted that Member Felice had attended the "Talking Trash - Is Anyone Minding the Store?" event, and a direct link was available on the website for that Maplewood event.

Member Felice lead a Power Point presentation on that event, and provided her observations of the arguments on both sides; and specifics related to ordinance enforcement and consumer protection issues. Member Felice highlighted hauler rate comparisons for cities with private haulers and those with organized collection, noting that the most expensive of those organized collections for the whole city was less than the least expensive private hauler rate.

Mr. Schwartz advised that the City of Maplewood required an annual report of hauler rates; and when they reviewed the actual bills experienced by residents, it was not the same as what was actually reported to the City. Mr. Schwartz noted there were also misconceptions about the fees for fuel/environmental recovery that were included on bills, but not actually state or county fees, and their definition varied from one hauler to the next.

Member Felice concurred, noting that it appeared to be a government fee, but was actually a company or hauler-initiated, similar to that of a cost of doing business fee. Member Felice noted concerns with deceptive language tactics creating opaque surcharges and/or arbitrary fees; causing cities to consider what sanctions the City could realistically incur, when they needed garbage haulers available. Member Vanderwall opined that this issue had come up during previous discussions from a hauler's perspective. Member Vanderwall further opined that, in reviewing the price list, it provided for experience of dollars, and disproved the perception that everything done by government was at a higher cost.

Member Felice noted that organized collection also provided for pick up of every can, and it became less likely that someone's service address would be missed; along with assurances that the contract could stipulate where the garbage would end up, and not allow it to be disposed of where the City could be held liable if not properly taken care of; both valid concerns.

Member Vanderwall concurred, noting that it was not only a liability issue, but also a philosophical issue for the end point.

Member Felice noted that an organized collection contract would allow the City to understand how much garbage was being produced in the City; with cities paying a tipping fee, with any changes addressed in the contract.

Chair DeBenedet noted that these were more interesting points for the Commission to consider in its continuing discussions. Chair DeBenedet noted other considerations were whether license fees adequate to administer and enforce existing City ordinances; policy brainstorming should Roseville adopt organized trash collection and concerns that fees would remain the actual cost for administering the program and not go toward a "slush fund" or another use or need.

Chair DeBenedet elaborated on the consensus direction provided from the City Council at their recent joint meeting with the PWET Commission, with the next step indicated for the Commission to get an engineering opinion on the actual impact on local streets from multiple haulers versus organized trash collection systems. Chair DeBenedet noted an interesting post on the Roseville Issues Forum recently, addressing current practices for weekly versus bi-weekly recyclable collection and response rates plus how that additional traffic impacted City streets, even though recycling trucks were smaller and should have less impact on the streets. Chair DeBenedet opined that it was an issue worth discussing.

Member Felice opined that it was easier to remember to put it out every week; and further opined that there was only one recycling truck for an entire neighborhood versus multiple garbage haulers.

Chair DeBenedet opined that it was time to move this issue along; and the proposed next step was a prudent one.

Mr. Schwartz noted the tool for local research developed by the Research Board at the University of Mankato; and anticipated availability in approximately two (2) weeks; with the tool designed to predict truck impacts on roads.

Chair DeBenedet noted that the Maplewood Engineer currently partnering with the City of Roseville engineering staff, Steve Kummer, was in his Master's Degree program, and his capstone project was trash truck impacts on local streets.

Members concurred that it was time to move this topic forward.

Member Felice noted how nice and positive it would be to have the potential to reduce prices for residents for trash collection, since utility rates had been raised significantly.

Member Gjerdingen questioned if the City had a current ordinance in place requiring residents to have their own private trash hauler, with Mr. Schwartz and Chair DeBenedet confirming that such an ordinance was in place.

Member Felice noted another positive with the City having an organized waste hauler contract would be that if a trash house was encountered, it provided a relationship with one hauler to take care of it more immediately; and also a contract could be written that allowed residents up to three (3) large items to be hauled annually.

9. Possible Items for Next Meeting – August 23, 2011

- Mr. Schwartz advised that staff anticipated having a draft of the Neighborhood Traffic Management Policy available, and should serve as the main topic for that meeting to facilitate the City Council's interest in having a recommendation from the PWET Commission at its earliest convenience.

  Member Vanderwall announced that he had a meeting conflict in August, and may not be able to attend the PWET Commission meeting. Member Vanderwall advised that, if he was unable to attend the August meeting, he would submit his written comments before then; however, he noted that it was a detailed project, and discussions would probably continue past the August meeting.

- Chair DeBenedet requested an item addressing Asset Management for Public Utilities; and advised that he would e-mail reference documents to staff for dissemination to individual Commissioners.

Chair DeBenedet noted that the purpose of such software was to provide a process of thinking about assets (e.g. sewer mains: their condition, age, maintenance frequency, schedule and how to coordinate other reconstruction in the same general location – storm sewer, water mains and street reconstruction)

Mr. Schwartz noted that it was getting problematic and unmanageable to not have the information contained in a comprehensive database to track work orders, etc.

Chair DeBenedet noted that this was another significant function to accomplish with an in-house staff person available long-term to enter, as well as filter and decipher reports from the data once entered

Mr. Schwartz suggested that this could be considered part of the implementation costs for the magnitude of the CIP program being discussed; and planning costs, software and staff resource could be part of those costs

Member Felice opined that she liked the idea of a GPS-like system of where you want the City to go and how to get there, further opining that it should pay for itself over and over again

Discussion ensued on current data tracking available to the department, while lacking cohesiveness and inability to keep track of maintenance performed, and documenting any call outs available in one software program tracked to specific city infrastructure.

Mr. Schwartz noted that the software would include the City's as-builts and other infrastructure data; and with the robust software programs currently available, it could generate work orders, provide for follow-up as well as send e-mail reminders for work to be completed or already completed.

Mr. Schwartz advised that such a program had been part of the Department's 2012 budget request.

Member Felice reminded staff to provide the website links from the Chair and Maplewood.

Member Gjerdingen, related to Solid Waste, noted current ordinance and the statement for City Code Hauler Requirements (last line) for exceptions being made if environmentally-friendly alternatives are provided; and opined that this would be an important statement to include even with a unified hauler system.

10. Adjourn

Member Vanderwall moved, Member Felice seconded, adjournment of the meeting at approximately 8:40 p.m.

Ayes: 4
Nays: 0
Motion carried.

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: September 27, 2011 **Item No:** 4

Item Description: Communication Items

- Projects update-
  - Check for City Construction project updates at: www.cityofroseville.com/projects
  - 2011 PMP- The Contractor has completed the base paving and sidewalk on Dale Street between County Road C and South Owasso Blvd. Fianl lift of asphalt should be places the week of the 26th. Paving has been completed on all of the segments of the mill and overlay streets. Weekly updates are available at www.cityofroseville.com\DaleStreet & www.cityofroseville.com\streetmaintenance.
  - Rosewood Neighborhood Drainage Improvements: The Contractor is working on punchlist items.
  - Applewood Pointe-The Contractor is nearly complete with the infrastructure work for this season. Final lift of asphalt will be places in the Spring.
  - Rice Street Project: All newly constructed ramps on the new interchange are now open. Final work is continuing on the permanent signal systems, median construction, and sidewalk construction. The bridges, pond construction, final paving, staining of concrete, and other restoration work should be complete by late September to mid October.
  - Fairview Pathway (NE Suburban Campus Connector)- the Contractor is scheduled to start construction on this project in Mid September.
  - Drainage Improvements- Staff is working on identifying segments to include in a 2012 drainage improvement project.
  - Josephine Woods – Work is scheduled to begin soon on the site grading and underground utilities.

- Budget process update
- RCL Organized Collection Meeting comments
- Other

Recommended Action:
None

Attachments:
A.

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: September 27, 2011 **Item No:** 5

Item Description: Neighborhood Traffic Management Policy

Background:
The Commission reviewed the City of Blaine's Neighborhood Traffic Management Policy at the June meeting. Staff has been drafting a similar policy based on the Blaine format for additional review and comment. We have attached this draft of the main body of the policy for further discussion and refinement. Staff will lead a discussion on areas it feels are in need of additional input. We are still working on the example strategy detail sheets to be attached in an appendix similar to the Blaine report.

Recommended Action:
Discussion and feedback

Attachments:
A. Draft Neighborhood Traffic Management Policy
B.
C.

Roseville Neighborhood Traffic Management Program

1.0 Introduction

Increasing traffic volumes and higher speeds have become important issues throughout the metro area and are having an increasing impact on residential streets in the City of Roseville. The City of Roseville is continually striving to strengthen and protect its neighborhoods by improving the quality of life in residential areas. A goal of the Roseville Transportation Plan is for the transportation system to address community issues and concerns while maintaining and enhancing neighborhoods, providing connectivity, and the sense of community cohesion.

Discussion with traffic engineers in cities with established traffic management programs provided insight into the need for a formal process. An established traffic management process:

- Allows the city to better respond to residents,
- Provides the opportunity for better understanding of the issues, and
- Allows consistent application across the community.

Therefore, for residents to obtain consideration for any given traffic control measures on either street or larger neighborhood area they are required to follow a process. The process will ensure that neighborhoods with demonstrated traffic issues and community support for traffic management have equal access to the neighborhood traffic process. The Neighborhood Traffic Management Program depends upon citizen involvement and may vary from year to year based upon citizen participation and available funding.

1.1 Purpose

This document was developed to guide city staff and inform residents about the processes and procedures for implementing traffic management strategies on local *residential streets* to address traffic concerns such as excessive volumes and vehicle speeds, high volumes of non-local through traffic, and vehicle crashes in neighborhoods. The document includes a summary of the City of Roseville's Policies for the Traffic Management Program, background on the history of traffic management, the City of Roseville's process for implementing strategies, and a toolbox of common traffic management measures.

2.0 Policies

The following policies are established as part of the Neighborhood Traffic Management Program for neighborhood streets:

- Compatibility with transportation goals in City of Roseville Transportation Plan.
- Implementation limited to local streets (no arterials or collectors) as identified in the Roseville Transportation Plan.
- Implementation of strategies will be funded by a combination of city funds and neighborhood participation.
- Trucks are allowed on all City streets unless otherwise posted (by State law trucks must be allowed on all State-Aided roadways.)
- The program intends to take a system-wide approach when addressing a neighborhood traffic problem. For each project, city staff will determine a logical project boundary that

will be necessary for the approval process and will help address the issue of displacement/diversion to other local streets.

- Implementation strategies will be limited to those local streets where the 85% speed exceeds 5 mph above the posted speed limit or where other traffic impacts affecting the livability of the neighborhood exists
- Implementation of traffic management strategies will be in accordance with the procedures set forth in this document, and in keeping with sound engineering practices, as well as be within the city's available financial and staff resources.
- Implementation of any devices will be consistent with the guidelines in the Minnesota Manual on Uniform Traffic Control Devices.
- Initial deployments are considered temporary for study purposes and subject to an interim review by City staff prior to permanent installation.

3.0 Traffic Management Background

The United States has used street closures and traffic diverters dating back to the late 1940s and early 1950s, but it was not until the 1970s that Seattle, Washington completed area-wide demonstrations of traffic management strategies. Since then, traffic management has been continually studied and implemented throughout the United States. Strategies include street closures, traffic diverters, speed humps/bumps, signing, increased enforcement and many others, but they all are implemented to accomplish one of the following:

- Modify driver behavior (reduce speed)
- Modify traffic characteristics (reduce volume)
- Improve safety (pedestrian and bicyclists)

Traffic management can be simplified as a two step process: (1) identify the nature and extent of traffic-related problems on a given street or area and (2) select and implement the proper strategy for reducing the identified problem. The traffic management strategies discussed in this document are solutions to a narrowly defined set of problems and are not universally applicable or effective at solving all problems. The wrong traffic management strategy used in the wrong application will not improve conditions - it will only increase City costs and may even make conditions worse.

Since not all strategies are appropriate for every problem the City has developed a process to identify the appropriate solutions. The process includes identifying the problem, evaluating potential strategies, and implementing appropriate measures while including public participation and governmental approva1. This process is summarized in Section 4.

The process and strategies included in this document are intended to be used on streets classified as local residential streets to reduce speeds and volumes. (Streets within the City of Roseville are classified based on definitions from the Metropolitan Council defined in Appendix C of the Roseville Transportation Plan. The current Road Classification Map, Figure 4.10 from the Roseville Transportation Plan, identifies street classifications within the City of Roseville – see Appendix D.) By definition arterials and collector roadways are intended to have higher speeds and accommodate higher volumes; therefore it would be against the function of arterials or collectors to implement traffic management strategies. These roadways are intended to operate efficiently with high volumes and speed. When arterials and collectors are operating

efficiently they provide the necessary mobility for the traveling public and prevent the need to divert to the residential street network.

4.0 Procedure Summary

A flow chart, *Exhibit 1*, provides a summary of the procedures for implementing a traffic management strategy on a residential street. The process includes the following steps:

Step 1 • Identify Candidate Streets/Neighborhoods
First residents must identify candidate streets for traffic improvement and submit a written request to the City Engineering Department. Any requests for project proposals require a written application with 50% of project neighborhood signing the application. *Appendix A* provides a sample request form.

Step 2 • Preliminary Screening and Evaluation
The City Engineering Department will review requests and determine whether they can be handled as part of the normal traffic engineering process or police enforcement function of the City or if they qualify for consideration under the Neighborhood Traffic Management Program.

Step 3 - Data Collection and Traffic Study
If it is determined that the request falls under the Neighborhood Traffic Management Program the City will undertake an engineering study of the street(s) or neighborhood including gathering relevant data of the proposed street.

Step 4 - Develop/Evaluate Traffic Management Strategies
Based on the traffic study and input from other departments, the City Engineering Department will make a preliminary determination of the need for traffic management measures and make recommendations as to which measures would be appropriate.

Step 5 - Conduct Neighborhood Meeting and Survey
A neighborhood meeting will be held, or a summary letter will be sent, to present the conclusions of the traffic study and discuss appropriate next steps in the process. At this time a survey will be sent out to determine neighborhood support for the recommended traffic management strategy and to receive input from affected residents.

Step 6 - Traffic Management Strategy Recommendation and Approval
The recommended strategy will not be implemented without the support of 65% of the project neighborhood and 50% of the affected neighborhood. In addition to neighborhood approval, the City Council must also approve the implementation of the traffic management strategy.

Step 7 - Implement Temporary Measures and Monitor
If measures are approved it may be possible to implement first a temporary measure. If a temporary measure is used, it will be monitored for a minimum of 3 months to determine its effectiveness.

Step 8 - Approve Permanent Measures
Results from the monitoring of the temporary measure will determine if the strategy will receive final approval from the City Council. If the temporary measure is not effective the Engineering Department will revisit the analysis and development of strategies (Steps 3 and 4) or choose to not continue the process.

Step 9 - Monitoring
Once a traffic management strategy has been implemented the City will continue to conduct periodic monitoring of the site to collect data for future implementation of strategies and to document the effectiveness of existing measures. This program and the associated Toolbox may be amended at any time by the City Council.

Appeals - Decisions of staff can be appealed to the City Council. The appeals process will follow established City procedures.

Removal - Existing traffic management measures and/or measures installed under the Program may be requested to be removed. The request for removal of a project will be processed generally using the same procedures as outline in this program requiring written request and appropriate neighborhood approval.

5.0 Procedural Details

Step 1 - Identify Candidate Streets/Neighborhoods

Residents may identify candidate streets or areas for traffic improvements. Some request may be handled by phone or verbally from residents to City Staff, which could result in increased police enforcement or placement of the City's speed display equipment. Any requests for permanent traffic management strategies require a written application with 50% of the project neighborhood signing the application. *Appendix A* provides a sample petition and request letter.

Application of these strategies on collector or arterial streets is excluded and not included in this process.

Step 2 -Preliminary Screening and Evaluation

The City Engineer will review requests to determine whether or not they should be handled as part of normal traffic engineering procedures or police enforcement of the City, or if they qualify for consideration under the Neighborhood Traffic Management Program. Some requests may be able to be handled within the current Capital Improvement Program such as planned infrastructure improvements or reconstructions. In addition, common requests for increased traffic enforcement, and placement of the variable speed display equipment are commonly handled by requests to the City Traffic Safety Committee.

Review of requests will consist of comparing the identified street characteristics with the following initial criteria:

- The street in question must be classified as a Local (residential) street in the City of Roseville Transportation Plan (see Figure 4.10 from Roseville Transportation Plan in Appendix D).
- The requests must be related to speeding, excessive traffic volumes, crashes, cut-through traffic, truck traffic, non-motorized transportation safety or other related impacts on a residential street.

If it is determined that the request falls under the function of this plan, then Step 3 will be initiated. If not, the request shall be followed up as appropriate by the City Engineer as part of the Departments normal function, including coordination with Police, Fire, and Public Works Departments as needed.

Step 3 - Data Collection and Traffic Study

If it is determined that the request falls under the guidelines of the management program, the City Engineer will conduct an engineering study of the street(s) or neighborhood. The study will include the following actions:

Define Project Area / Impacted Area

The definition of the project area and impacted areas sets up the project boundaries and will be used to determine neighborhood support during the petition process and for the assessment process if a strategy is implemented.

Data Collection

Traffic data collection will include (as appropriate based on identified problem) one or more of the following:

- Traffic volume counts (24 hour counts in 15 minute increments, truck volume counts)
- Non motorized transportation counts
- Speed surveys
- Cut-through traffic estimates
- Crash information (three years recommended)
- Roadway Geometry (sight distance, lane configuration, etc.)
- Land Use Mix (density of residential and presence of sidewalks, pedestrian generators such as schools, parks, bus routes, unique features)

Evaluation of Traffic Data

From the data collected the traffic problems associated with the neighborhood street can be documented. The documentation will be valuable in the development of possible traffic management strategies.

From the data collected the City will also be able to rank the potential projects for further study. *Table 1* provides the ranking criteria. This ranking will be beneficial if the number of request submitted is beyond the fiscal and staffing ability of the city. By ranking requests based on the criteria set forth in *Table 1*, the city can prioritize the projects to focus funding accordingly.

TABLE 1 Ranking of Traffic Management Requests	
85th Percentile speeds 5 mph over posted speed limit	Yes - +200 No - +0
Public school yard, parks, playground development adjacent to benefited area (0 to 200 points)	None +0 All of 1 side +100 All of 2 sides +200
Residential development adjacent to benefited area (0 to100 points)	None +0 All of 1 side +50 All of 2 sides +100
Number of reported correctable crashes based on last 5 years of available data (0 to 200 points)	20 per crash; maximum of 200 points
Pathway adjacent to project area (0 to 100 points)	None +100 All of 1 side +50 All of 2 sides +0
Percent of potential assessment properties supporting project by petition (180 to 300 points)	3 points per percent; maximum 300 points
Average residential density adjacent to project area (0 to50 points)	0 dwelling units per 100 lin. ft. = 0 points 5+ dwellings units per adjacent 100 lin. ft. = 50 points

Step 4 - Develop/Evaluate Traffic Management Strategies

Using the data collected during the development of the traffic study and applying recognized traffic engineering standards, the City Engineering Department will recommend the use of one or more neighborhood traffic management strategies. A "toolbox" of strategies is included in *Section 6.0* of this plan. While it is not inclusive of all strategies, it provides a summary of the most applied and successful measures as documented in the research summarized in *Appendix B.* The toolbox includes a brief description of the strategy, its effects on volume, speed, noise, and safety, a discussion of its advantages and disadvantages and design considerations. The following strategies are included in the toolbox:

Traffic Control Devices

- Vehicle Restrictions
- Turn Restrictions
- One-Way Streets
- Watch Children Signs
- Stop Sign Implementation
- All-Way Stop Sign Implementation
- Parking Restrictions
- Pavement Markings
- Speed limits

Enforcement

- Increased Enforcement
- Variable Speed Display Board

Roadway Adjustments

- Narrowing Lanes
-Chokers
- Mid-Block Narrowing
- Chicane

Vertical Elements

- Speed/Tables
- Raised Crosswalk
- Median Barrier
- Traffic Circle
- Street Closure
- Full / Diagonal Diverter
- Partial Diverter

Effectiveness of Strategies

As stated earlier, traffic management strategies are not universally applicable or effective at solving all problems. The Institute of Transportation Engineers has collected data on the effectiveness of traffic management strategies implemented throughout the United States. *Table 2* provides a summary of this data and can be useful in the selection of appropriate traffic management strategy to implement. Along with the information provided in Table 2 on effectiveness, the following are some other effectiveness considerations:

- Traffic control devices, by themselves, are almost never effective at reducing traffic volumes or vehicle speeds.
- Enforcement can be effective if applied regularly and over an extended period of time.
- In most cases, enforcement will result in local residents being ticketed.
- Roadway adjustments (narrowing) have proven to be moderately effective but at high implementation costs.
- Vertical elements (primarily speed humps/bumps) have proven to be moderately effective but neighborhood acceptance has been mixed.
- The combination of enforcement plus other strategies has proven to be the most effective approach.

TABLE 2 Effectiveness Management of Strategies	**Volume Reduction**	**Speed Reduction**	**Safety Improvement**	**Increase in Air / Noise Pollution**	**Emergency Access Issues**	**Access Restriction**	**Increased Maintenance Efforts**	**Cost**
Traffic Control Devices								
Vehicle Restriction	Poss	Poss	Poss	No	Poss	Yes	No	Low
Turn Restrictions	Yes	Poss	Poss	No	No	Yes	No	Low
One-Way Streets	Poss	No	Poss	No	Poss	No	Poss	Low
Watch Children Signs	No	No	No	No	No	No	No	Low
Stop Sign Implementation	No	No	No	Yes	Yes	No	No	Low
All-Way Stop	No	No	Poss	Yes	No	No	No	Low
Parking Restrictions	No	No	Poss	No	No	No	No	Low
Speed limits	No	No	No	No	No	No	No	Low
Painted Crosswalks	No	No	No	No	No	No	No	Low
Enforcement								
Increased Enforcement / Speed Watches	No	Yes	Poss	No	No	No	No	Mid
Variable Speed Display Board	No	Yes	Poss	No	No	No	No	Low
Roadway Adjustments								
Narrowing lanes	No	Poss	Poss	No	No	No	No	Mid
Chokers	No	Poss	Yes	No	Poss	No	No	High
Mid-Block Narrowing	No	Poss	Poss	No	No	No	No	Mid
Chicane	Poss	Poss	No	No	No	No	Yes	High
Sidewalks	No	No	Poss	No	No	No	Poss	Mid
Vertical Elements								
Speed Bumps/Humps/Table	Poss	Yes	Poss	Poss	Poss	No	Poss	Mid
Raised Crosswalk	Poss	Yes	Poss	Poss	Poss	No	Poss	Mid
Median Barrier	Yes	Poss	Poss	No	Yes	Yes	Poss	High
Traffic Circle	No	Poss	Poss	No	Poss	No	Yes	High
Street Closure	Yes	Poss	Poss	No	Yes	Yes	Poss	High
Full Diverter	Poss	Poss	Poss	No	Yes	Yes	Poss	High
Partial Diverter	Poss	Poss	Poss	No	No	Yes	Poss	High

Cost Estimate and Funding

For the purpose of discussions with affected residents, a cost estimate will be developed for the recommended strategy. It is the policy of the City of Roseville that the following cost sharing will occur with an approved traffic management strategy:

- City of Roseville will pay the cost of administrative work, traffic study and data collection
- City of Roseville pays 25% of the construction and installation costs of major strategies while the neighborhood affected will pay 75% of the cost (minor items such as installation of a limited number of signs or painting of crosswalks and other pavement markings would be assumed completely by the City)

Costs associated with implementing traffic management strategies vary significantly from just over $250 for installing a speed limit sign to $10,000 or more for a landscaped median construction. *Table 3* provides a summary of typical implementation costs for traffic management strategies.

TABLE 3
Typical Implementation Costs

Type of Implementation	Unit	Unit Cost
Warning Signs	Per sign	$250
Pavement Markings		
- Roadway Striping	Per linear foot	$1.00
- Crosswalk Striping	Per crosswalk	$150
Textured Pavement	Per crosswalk	$1,500
Street Lighting	Per fixture	$7,500
Raised Crosswalk	Per crosswalk	$4,000
Speed Table	Per table	$5,000
Mid-Block Choker	Per choker	$5,000
Intersection Choker	Per approach	$5,000
Mid-Bock Speed Table	Per table	$7,500
Intersection Speed Table	Per intersection	$25,000
Traffic Circle	Per intersection	$15,000
Center Island	Per approach	$15,000
Half Closures	Per intersection	$40k to $60k
Full Closures	Per intersection	$120,000

Source: City of Minneapolis & ITE, Traffic Calming - State of the Practice

While the city will cost share only the implementation costs, the consideration of future maintenance costs are also a factor for determining the most appropriate strategy. While the implementation of a traffic sign may appear to be the least expensive option at only $250, the additional per year cost of annual maintenance needs to be considered. A comparison of the annual costs for the most common strategies for speed reduction, increased enforcement and speed humps, is included in *Table 4.*

TABLE 4
Comparison of Annual Costs

Measure	Initial Cost	Annual Cost	Annual Revenues
Photo-radar (ownership option)	$85,000	$145,000	$40,000
Photo-radar (lease option)		$214,000	$40,000
Targeted Police Enforcement	$70,000	$194,000	$40,000
Speed Humps	$300,000	$30,000	$0

Source: ITE, Traffic Calming - State of Practice

Step 5 - Conduct Neighborhood Meeting and Petition

After the completion of the traffic study and the development and evaluation of potential strategies, the city will either hold a Neighborhood Meeting or distribute a letter to inform the community on the process and results of the traffic study and provide information on the recommended strategies. Based on the engineering study and input from residents, the city will make a preliminary determination and recommendation for the need of traffic management strategies.

Step 6 - Traffic Management Strategy Approval

Once the traffic study results, management strategies, and cost estimates have been provided to affected neighborhood residents, a survey/petition will be circulated to ascertain whether or not the neighborhood approves of the recommended strategy and are willing to cover the potential costs of implementation. The recommended strategy will not be implemented without the support of 65% of the project neighborhood and 50% of any affected neighborhood.

Once approval is obtained from the neighborhood the strategy will be presented to the City Council for approval.

Step 7 - Implement Temporary Strategy and Monitor

In most cases, the strategy will be implemented with temporary materials and remain in place for approximately three to six months depending on the type of improvement. The strategy will be evaluated to determine if it addresses the identified problems and is consistent with the Neighborhood Traffic Management Plan goals. During the test period residents may provide comments to the City Engineering Department regarding the improvement. At any time during this test phase appeals of the decision for installing the strategy can be submitted and forwarded to appropriate staff.

Step 8 - Approve Permanent Strategy

If it is determined that the temporary strategy does not achieve the intended goals of reducing speeds, cut through traffic or other identified problems, the City Engineering Department will review other potential measures and recommend the elimination of all strategies or test the installation of a different strategy.

Effective temporary strategies will be brought to the council for approval for the installation of a permanent form of the approved traffic management strategy.

Step 9 - Monitoring and Future Actions

The City will conduct periodic monitoring of the fully installed traffic management strategy to determine if the project continues to provide effective improvement to the neighborhood. The monitoring will be conducted at the discretion of the City based on available funding, staffing levels, and resident comments.

If monitoring shows that the implemented strategy fails to achieve the intended goals it may be removed.

Legal Considerations

From the local government perspective, the legal issues surrounding traffic management strategies fall into three categories: statutory authority, constitutionality, and tort liability. First, the local government must have legal authority to implement traffic management strategies on a given roadway (statutory authority). Second, the local government must respect the constitutional rights of affected landowners and travelers on the roadways (constitutionality). And finally, the local government must take steps to minimize the risk to travelers from the installation of traffic management strategies (tort liability). Through documentation of the entire process, including the collection and evaluation of traffic data, the decision process, and interaction with the public, the Roseville Traffic Management Program can minimize potential legal difficulties.

6.0 Toolbox of Neighborhood Traffic Management Strategies

The following Toolbox provides information on a variety of traffic management strategies. Each strategy includes information on its purpose, its effectiveness for solving different types of traffic problems, and a summary of advantages and disadvantages for implementation. To make the toolbox understandable and usable it has been organized into types of strategy as follows:

Traffic Control Devices - the use of common traffic control devices, such as signing and pavement markings, to solve neighborhood traffic problems. Included in this category are:

- Vehicle restrictions
- Turn restrictions
- One-Way streets
- Watch for Children Signs
- Stop Sign Implementation
- All-Way Stop Sign Implementation
- Parking Restrictions
- Pavement Markings
- Speed Limits

Enforcement - there are two options for using enforcement as a traffic management strategy: increase police enforcement, the use of Variable Speed Display Boards

Roadway Adjustments - there are multiple strategies for traffic management that change the appearance of the roadway including:

- Narrowing of lanes
- Chokers
- Mid-Block Narrowing
- Chicane

Vertical Elements - introducing vertical elements to the roadway, either as obstacles for vehicles to drive over or around, are common traffic management strategies. These include:

- Speed/Tables
- Raised Crosswalks
- Median Barrier
- Traffic Circles
- Street Closer
- Full / Diagonal Diverter
- Partial Diverter

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: September 27, 2011 **Item No:** 6

Item Description: Asset Management for Public Works

Background:
The Commission requested a discussion regarding asset management programs for utilities. Please follow this link for background information on asset management programs as provided by Chair DeBenedet. http://water.epa.gov/type/watersheds/wastewater/index.cfm

Also we are attaching an excerpt from the report Mr. DeBenedet compiled about Roseville Utilities as he references asset management as a tool.

Recommended Action:
Discussion

Attachments:
A. Utilities report excerpt
B.

The public works department performs all routine maintenance and repairs on the sewer and water systems. Most of the annual CCTV inspections of sewers is contracted out due to the low cost of contracting based on quantities of about 80,000 feet per year.

5.2 Engineering and Administrative Staff

The city has an engineering department. This is a part of the public works department and under the direction of the director of public works and the city engineer.

The engineering department has a city engineer and one assistant engineer. Both are licensed professional engineers. The assistant engineer is contracted to another city for 80% of her time. There are three engineering technicians who perform surveying, design, drafting, and construction inspection duties. There is one administrative assistant in the department.

The engineering department prepares studies, reports, bidding and construction documents, inspects the work of contractors, and administers construction contracts.

5.3 GIS System

The public works department has one full-time GIS specialist. She maintains the GIS maps and records of the city. The GIS maps included in this paper were prepared by the city GIS specialist.

6 Asset Management Software

6.1 Asset Management – General

Asset management refers to techniques to operate and maintain assets, such as a sewer system, in an informed and comprehensive manner. According to a USEPA Fact Sheet, Asset Management for Sewer Collection Systems[47], "*asset management can be defined as managing infrastructure capital assets to minimize the total cost of owning and operating them, while delivering the service levels customer's desire.*" This reference is directed toward sewer systems, but the principles apply to water systems as well.

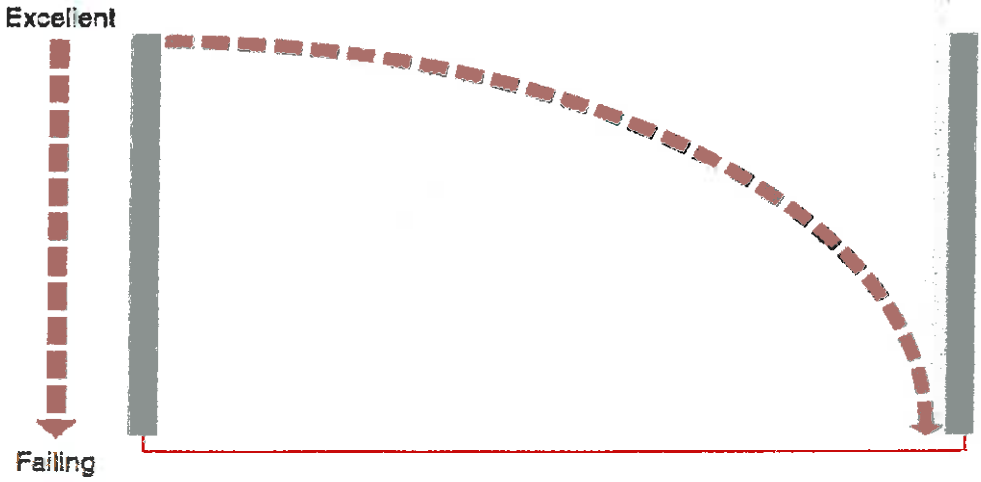
[47] USEPA, Fact Sheet, Asset Management for Sewer Collection systems, April, 2002

Asset management is successfully practiced in large cities and regional sewer collection systems. In a simpler form, it can also be used in smaller cities starting with existing staff resources and equipment. Asset management has many benefits including improved operation and maintenance, improved financial management, and improved capital improvement planning. These are critical in times of financial and resource limitations imposed on utilities by decision makers and customers. Another way of looking at asset management is a comparison of asset management with no asset management.

Table 11 - Comparison of Asset Management Alternatives

With Asset Management	Without Asset Management
• Operations scheduled for efficiency • Maintenance performed based on operator feedback, demonstrated effectiveness, cost and results • Maintenance is planned and budgeted in advance • Capital improvements based on five or six year planning and cost-benefit or cost-effectiveness studies • Capital improvements usually performed before complete failure or emergency • Capital improvements are intervention type projects designed to extend the life of assets • Capital budget is separate from ongoing budget • Rate increases are justified by studies and are adequate to fund operational and capital goals • High employee morale	• Operations scheduled without consideration for efficiency • Maintenance performed based on past practices without consideration of cost or results • No capital improvement planning • Capital improvements are often required by system failures and emergencies • No long-term financial planning • Budgeting is reactive and often in deficit • Rate increases are poorly justified and customers often skeptical • Poor employee morale

This same resource states *"Sewer system assets that are not regularly maintained usually deteriorate faster than expected and lead to higher replacement and emergency response costs."* This is illustrated by the graph below which is taken from that report.



Source: USEPA, Fact Sheet, Asset Management for Sewer Collection systems, April, 2002

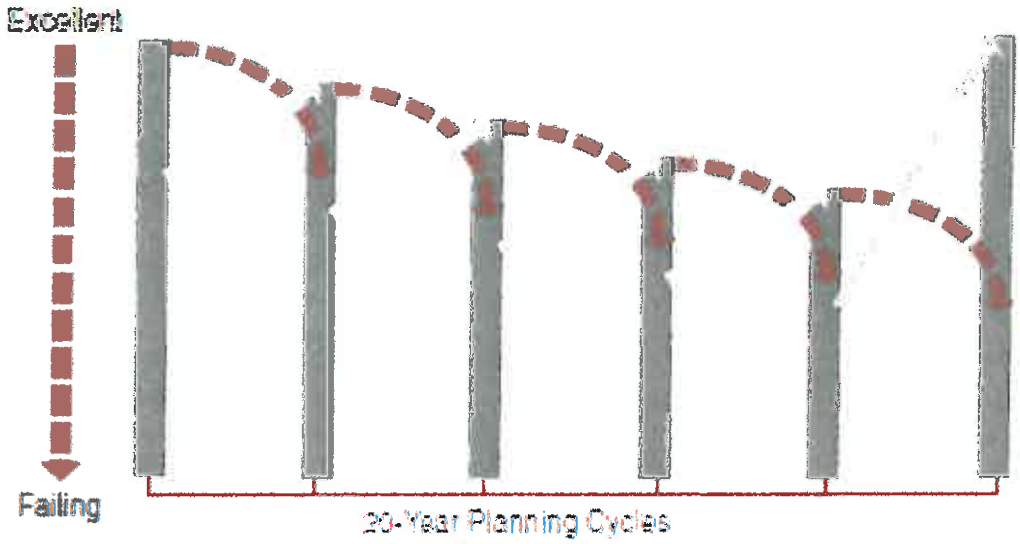
Figure 24 - Run to Failure Model of Utility System Management

The USEPA Fact Sheet goes on to state the benefits of asset management further by stating *"Components are regularly maintained over long planning cycles, and finally replaced when deterioration outweighs the benefits of further maintenance. Costs are well-distributed over the life of the asset."* Further, there are key bullet points made in a manner of emphasis:

- *"Making sure components are protected from premature failure through proper operations and maintenance.*
- *Facilitating proactive capital improvement planning and implementation over longer cycles to reduce annual and overall costs.*
- *Reducing the need for expansions and additions through demand management(I/I reduction, flow balancing, etc.)*
- *Reducing the cost of new or planned investments through economic evaluation of options using life-cycle costing and value engineering.*

- *Focusing attention on results by clearly defining responsibility, accountability, and reporting requirements within the organization."*

In contrast to the "Run to Failure" model depicted in the graph on the previous page, the model used in asset management is depicted below. This graph shows the same asset with maintenance interventions at key times to maintain a higher level of service over the life of the asset.



Source: USEPA, Fact Sheet, Asset Management for Sewer Collection systems, April, 2002

Figure 25 - Asset Management Model of Utility System Management

Sewer and water systems are prime candidates for asset management since they are long-lived, high-cost, and complex systems. The public expects they will be well maintained and that the assets will provide a high level of service at minimum cost. These goals are shared by sewer and water professionals including design engineers, system managers, and operators as well.

Some of the key elements of asset management which are the responsibility of all members of the organization involved with the utility management are:

- Level of service definition
- Selection of performance goals
- An information system
- Asset identification and valuation

- Failure impact evaluation and risk management
- Condition assessment
- Rehabilitation and replacement planning
- Capacity assessment and assurance
- Maintenance analysis and planning
- Financial management
- And continuous improvement[48]

USEPA goes on to tie these concepts to another recent development in sewer system management called Capacity, Management, Operation, and Maintenance (CMOM). CMOM was developed by the USEPA in conjunction with municipal and other industry representatives. In brief, CMOM is an information-based approach to setting operational and maintenance priorities. It includes a comprehensive questionnaire for the utility managers and operators. It is lengthy, about 66 pages, and would be time consuming and daunting to complete. Yet it is valuable in that it forces managers to answer specific questions about the sewer system that are important, yet probably not well known to the typical system manager or operations supervisor. Completion of the CMOM checklist is an important and valuable part of asset management for a sewer system. It would be valuable also, to prepare a similar companion checklist for the water system.

The foregoing has dealt with asset management as it relates to operations, maintenance and capital improvements. There is also a financial management aspect to asset management which will be dealt with in Section 9.

6.1.1 ArcGIS

The city uses ArcGIS™ software as a GIS platform. Several GIS maps are maintained with sewer and water system information including some of the maps in this report. During the course of this project, I requested and received additional GIS maps including the age of sewer and water main maps and locations of sewer back-ups that were key to this project.

[48] USEPA, Fact Sheet, Asset Management for Sewer Collection systems, April, 2002

Roseville Public Works, Environment and Transportation Commission

Agenda Item

Date: September 27, 2011 **Item No:** 7

Item Description: Look Ahead Agenda Items/ Next Meeting October 25, 2011

Suggested Items:

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Recommended Action:

Set preliminary agenda items for the October 25, 2011 Public Works, Environment & Transportation Commission meeting.